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PREVENTABLE DISEASE CIRCULARS.

FACTS FOR THE PEOPLE CONCERNING

CHOLERA.

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CALIFORNIA STATE BOARD OF HEALTH.

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FACTS FOR THE PEOPLE REGARDING CHOLERA.

The Legislature of the State of California, during its last session, 1885, having, with the utmost indifference to the sanitary welfare of the people, in utter disregard of the suggestions offered by his Excellency Governor Stoneman, in his biennial message, and equally regardless of the importunities of the State Board of Health, refused to appropriate a single dollar to protect the State from the invasion of infectious or contagious diseases; therefore, in view of the possibility, or rather the probability, of *cholera* extending its ravages to the Pacific Coast this Summer, the State Board of Health deem it prudent to offer to the public a few words of warning as to the necessity of the early employment of sanitary measures, to arrest the development of disease or mitigate its virulence if, unfortunately, it should appear among us.

Cholera being essentially a *preventable* disease, all questions concerning its cause, diffusion, and prevention, must interest the people of this coast just now, when Europe is again the theater of its manifestations; and as all preventive measures are based upon the assumption that the virus or germ of the disease is a living organism capable of transmission through water, food, clothing, or personal contact, and like all living matter, is itself susceptible of death, the prevention of its dissemination, or the means of its speedy destruction, are the desiderata to be sought.

Cholera upon these shores is a foreigner, and has never yet visited us, except by importation, and then only after ample warning. Last year the warning came to us from France and Italy; this year it comes from Spain and the shores of the Mediterranean. How soon it may reach New York or other seaports upon the Atlantic border is a question

of time. It is sure to come along the highway of travel, and once landed on our shores will make its way across the continent quite speedily. Had the question of quarantine, efficiently exercised, been entertained by the last Legislature, and provision made for its maintenance, we believe we could have kept cholera, yellow fever, and smallpox out of California. The highway is now open, and we must expect to reap the fruits of the criminal negligence, ignorance, and stupidity of our law-makers.

What can be done in the way of prevention locally? Much may be done if the officers of health, or the properly constituted authorities do their duty. Cholera, as was said before, is a preventable disease; its habitat is among a crowd; it revels in filth and decomposing organisms, but failing to find suitable conditions for its growth and maintenance it dies out. Consequently, the very first thing to be done is for each individual to see that *his* house, outhouse, and yard is put into a good sanitary condition. Do not wait for any health officer, see to it *yourself*. Have your drains cleaned out and flushed with water; your privy or cesspool emptied and disinfected immediately. See that your cellar is cleared of all decaying substances, have it thoroughly whitewashed, and all filth, rags, etc., burned. If you have a well see that the water thereof is not contaminated by drainage from the house or outhouses. If you have the slightest suspicion that it is, boil the water before using, or, better still, shut up that well and dig another away from all chance of such contamination. If you use river water, which is always more or less polluted, see that it is boiled before drinking it, and you will save your health for the trouble. Avoid crowding in sleeping rooms. See that each room is properly ventilated, nothing being so conducive to disease as an overcrowded and ill ventilated apartment. Plenty of fresh pure air, pure water, and wholesome food, with household and personal cleanliness, will do more to prevent the access of cholera to your dwelling than all the supplications of the credulous, or the nostrums of the charlatan. While there is danger of cholera, or, indeed, any epidemic disease, developing in your midst, it is an act of prudence to avoid excessive fatigue from any

source, as the system when tired or exhausted is much more liable to infection and less able to resist it than in other conditions. It is also indispensable that the stomach and bowels be kept in a healthy state by avoiding all unripe fruit, decaying vegetables, fish, flesh, or any food that is not perfectly sweet and fresh. Temperance in all things should be enjoined, and especially in alcoholic beverages, as it is found by experience that the intemperate, or those addicted to drinking intoxicating fluids habitually, are the first to die in an epidemic of cholera. Nature knows no mercy in dealing with the violators of Nature's laws; if her laws are transgressed the punishment is swift and certain. Food should not be kept in the same room with the sick from any infectious disease; neither should that unconsumed by the sick be used by others, but either burned or disposed of in some other equally safe way.

If cholera should appear in your dwelling, the first thing to do is to isolate the patient, put him in a comfortable room without carpets and with as little furniture as is consistent with comfort, disinfect immediately all discharges from the body, and either burn or bury them, do not throw them into either privy or cesspool to poison your family or your neighbors; see that the patient has medical attendance promptly; do not wait ten or twelve hours to see if he will get better—delay in cholera means death. Cholera always gives warning of its approach by premonitory diarrhœa; this is the favorable opportunity to arrest the disease, the attack is then under the control of medicine judiciously chosen and administered; a few hours delay and it will have passed from comparative safety into extreme danger, perhaps beyond the power of remedies to save; act, then, promptly and intelligently, and a valuable life may be rescued from a fatal illness.

If there is no medical man within easy call, and a person be attacked with premonitory diarrhœa, place him in bed at once, apply warmth to the feet, a mustard poultice over the abdomen, and give a teaspoonful of paregoric (which is to be found in every family), every hour until your medical attendant arrives. Do not give indiscriminately, stimulants—brandy, red pepper, camphor, ginger, etc., advised by busy-

bodies; wait for skilled medical advice—more people are killed by quackery and meddlesome trifling than by disease.

If traveling, avoid as much as possible using urinals or water closets at railway stations; they are constant sources of infection, if not properly taken care of and daily disinfected.

Remember that cholera is always, in this country, imported; it seeks crowds, and follows, as a rule, the line of travel; railway companies and lines of transportation generally, should see that all urinals, water closets, and baggage rooms belonging to the company, or about their premises, are daily cleansed, purified, and disinfected.

DISINFECTION AND DISINFECTANTS.

Disinfection is the destruction of the poisons of infectious or contagious diseases. *Deodorizers*, or substances which destroy smells, are not necessarily disinfectants, and disinfectants do not necessarily have an odor. *Disinfection* cannot compensate for want of cleanliness or of ventilation.

DISINFECTANTS TO BE EMPLOYED.

Roll Sulphur (brimstone), for fumigation; this is a cheap and efficient substance for fumigating rooms; it is positively destructive to disease germs, when efficiently used.

Sulphate of Iron (copperas), dissolved in the proportion of one and a half pounds to the gallon of water, is a cheap and reliable deodorizer and antiseptic for privies, cesspools, sewers, etc.

Sulphate of Zinc, in the proportion of four ounces of sulphate and two ounces of common salt to the gallon of water, is efficient and harmless for clothing, bed linen, blankets, etc. It should be used boiling hot, and the articles to be disinfected plunged into it and thoroughly boiled.

Corrosive Sublimate, in the proportion of a quarter of an ounce to the gallon, is an unsurpassed germicide and disinfectant, but has the disadvantage of being excessively poisonous and therefore dangerous for general use.

Carbolic Acid, is of uncertain strength, is expensive, and experience has shown that it must be employed in compara-

tively large quantities to be of any use. It is also liable, by its strong odor, to give a false sense of security.

HOW TO USE DISINFECTANTS.

I. *In the sick room.* The most available agents are fresh air and cleanliness. The clothing, towels, bed linen, etc., should, on removal from the patient, be placed in a tub of the zinc solution, boiling hot if possible. All discharges from the patient should either be received in vessels containing the copperas or corrosive sublimate solution, or if this is impracticable, should be covered with the solution. Unnecessary furniture, especially that which is stuffed, carpets, and hangings, should be removed from the room at the outset, if possible, otherwise they should remain for fumigation and treatment.

II. *Fumigation* with sulphur is the only practicable method of disinfecting the house. For this purpose the rooms to be disinfected must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with the zinc solution, should be opened and exposed during fumigation, as directed below: Close the rooms as tightly as possible, stopping up every crevice and keyhole; place the sulphur in iron pans supported upon bricks placed in washtubs containing a little water, set it on fire with alcohol or kerosene sprinkled upon it, and allow the room to remain closed twenty-four hours. For a room ten feet square at least two pounds of sulphur will be required; for larger rooms proportionately larger quantities will be necessary.

III. *Premises*, cellars, yards, stables, gutters, privies, cess-pools, water closets, sewers, drains, should be liberally treated with the copperas solution; it is cheap and effective, and may save your life. The copperas solution may be easily prepared by hanging a basket containing about sixty pounds of copperas in a barrel of water.

IV. *Body and bedclothing.* It is best to burn all articles which have been in contact with persons sick of infectious or contagious diseases. Articles too valuable to be destroyed should be treated as follows: *Cotton, linen, flannels, blankets,*

etc., should be treated with the boiling hot zinc solution: introduce piece by piece; secure thorough wetting, and boil for half an hour. *Furs, silks, heavy woolen clothing, bedcovers, and beds*, which cannot be thus treated with the zinc solution, should be hung in the room during fumigation, their surfaces fully exposed and their pockets turned inside out; afterwards they should be hung in the open air—beaten and shaken. Pillows, beds, stuffed mattresses, upholstered furniture, etc., should be cut open, the contents spread out, and thoroughly fumigated. Carpets are best fumigated on the floor, but should afterwards be removed to the open air and thoroughly shaken and beaten.

V. *Corpses* should be washed thoroughly with the zinc or corrosive sublimate solution, then wrapped in a sheet wet with the solution, and buried at once. Metallic or metal-lined coffins should be used when possible, and *always* when the body is to be transported for any considerable distance.

If these notes of warning and guides to action are heeded, and fear does not usurp the place of common sense, we have little to dread from cholera personally. It is the unthinking multitude, the selfish egotist, the "wait until it comes" people, that we have to fear. "An ounce of prevention is worth a pound of cure," and there is no disease to which this aphorism so aptly applies as *cholera*.

By order of the Board.

GERRARD G. TYRRELL, M.D.,
Permanent Secretary State Board of Health.

SACRAMENTO, April 24, 1885.

N. B.—Copies of this circular for free distribution can be had on application to the Secretary.